

DYNAMIC MODELING TECHNIQUE FOR THE DEPLOYMENT OF LARGE
SATELLITE ANTENNAS

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ABSTRACT

A method for modeling a structure deployed on a spacecraft. The method includes determining a geometric shape that resembles the structure in a fully deployed configuration; generating time functions for a change in shape of at least one structural component of the structure, the change in shape occurring as the structure expands into the fully deployed configuration; and calculating mass properties of the geometric shape as a function of the time functions.